NAME

posix_openpt - open a pseudo-terminal device

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

#include <fcntl.h>
#include <stdlib.h>

int
posix_openpt(*int oflag*);

DESCRIPTION

The **posix_openpt**() function allocates a new pseudo-terminal and establishes a connection with its master device. A slave device shall be created in */dev/pts*. After the pseudo-terminal has been allocated, the slave device should have the proper permissions before it can be used (see grantpt(3)). The name of the slave device can be determined by calling ptsname(3).

The file status flags and file access modes of the open file description shall be set according to the value of *oflag*. Values for *oflag* are constructed by a bitwise-inclusive OR of flags from the following list, defined in <*fcntl.h*>:

O_RDWR Open for reading and writing.

O_NOCTTY If set **posix_openpt**() shall not cause the terminal device to become the controlling terminal for the process.

O_CLOEXEC Set the close-on-exec flag for the new file descriptor.

The **posix_openpt**() function shall fail when *oflag* contains other values.

RETURN VALUES

Upon successful completion, the **posix_openpt**() function shall allocate a new pseudo-terminal device and return a non-negative integer representing a file descriptor, which is connected to its master device. Otherwise, -1 shall be returned and errno set to indicate the error.

ERRORS

The **posix_openpt**() function shall fail if:

[ENFILE] The system file table is full.

[EINVAL] The value of *oflag* is not valid.

[EAGAIN] Out of pseudo-terminal resources.

SEE ALSO

ptsname(3), pts(4), tty(4)

STANDARDS

The **posix_openpt**() function conforms to IEEE Std 1003.1-2001 ("POSIX.1"). The ability to use O_CLOEXEC is an extension to the standard.

HISTORY

The **posix_openpt**() function appeared in FreeBSD 5.0. In FreeBSD 8.0, this function was changed to a system call.

NOTES

The flag O_NOCTTY is included for compatibility; in FreeBSD, opening a terminal does not cause it to become a process’s controlling terminal.

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